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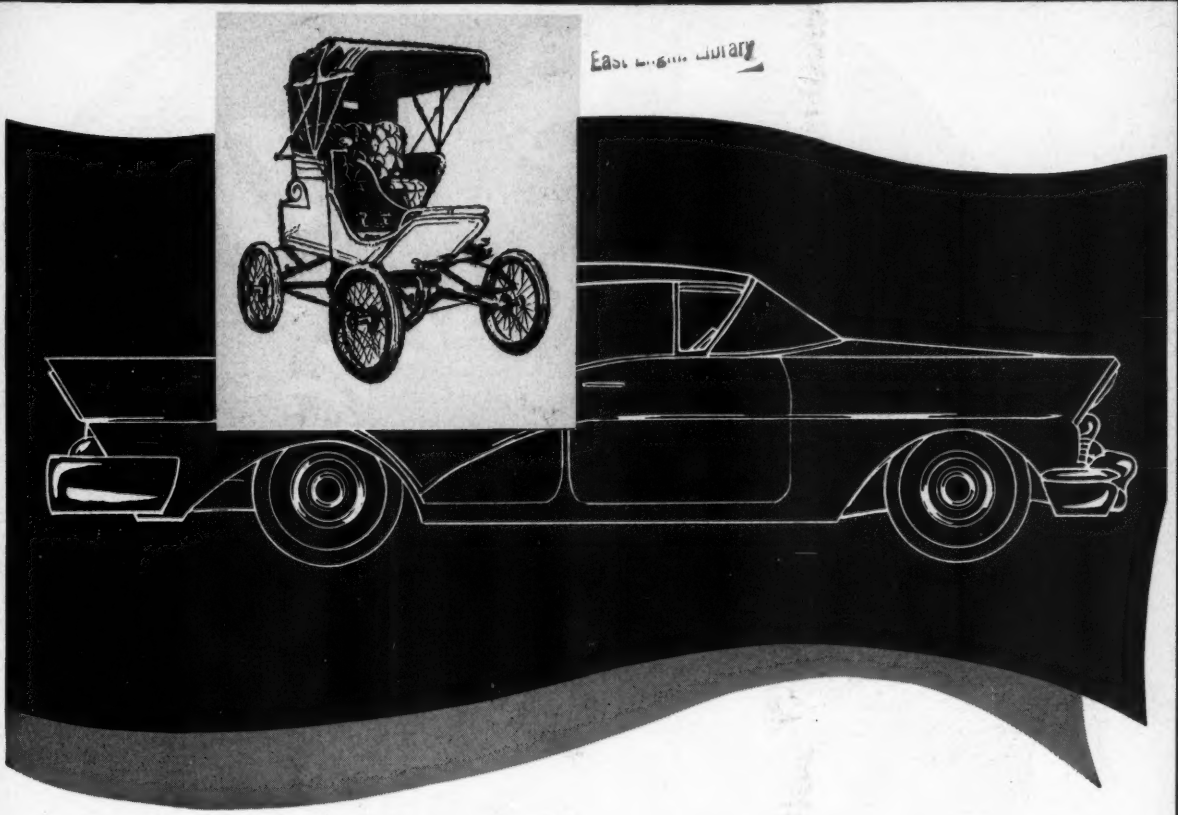

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W. C. MONROE—President and Editor
KINZIE MILLER—Vice President
LARRY O. MILLER, Advertising Manager
RICHARD SNEDDON, Contributing Editor

FRED JONES, Chicago Manager
Room 517, 205 W. Wacker Dr., Chicago 6, Ill.
HOWARD F. McCLENAHAN—Cleveland Manager
402-1010 Euclid Bldg., Cleveland 15, Ohio
The McKeown Company—New York Representatives
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July 15th, 1957

California Operators Drill In Nearby States

Californa operators are again identified with exploration in the Pacific Northwest and the petroleum search up there is more likely to expand than to diminish.

In the next few weeks, General Petroleum Corporation probably will have the rotary spinning on its Long Bell No. 1 well on Section 27-20s-10w, 12 miles northeast of Reedsport in Douglas County, Oregon.

Designated target depth of the well will be something like 9000 feet, with drilling chores in the hands of Green & Heiser of Bakersfield. Velton Walker is toolpusher.

At Rattlesnake Hills, Benton County, eastern Washington, Standard Oil Company of California is drilling Rattlesnake Hills Unit No. 1 on Section 15-11n-24e. Prospecting will be the order of the day to 8000 feet, plus No. 1 stratigraphic test at 8725 feet. Location was south by around 100 miles from the Rattlesnake Hills venture.

Although Four Corners is the current sensation of the nation's oil work, California companies are not overlooking other areas outside the state's borders where oil prospects appear favorable.

Nevada Test

Just now in Nevada, Standard as operator is drilling County Line Unit No. 1 wildcat on Section 19-10n-62e, approximately 39 miles southwest of Ely in White Pine County and 27 miles of a trio of wells which Shell Oil Company completed a few years ago in Railroad Valley.

The Play, on a 16,000-acre block, is sponsored by Standard and Shell. A number of other operators hold acreage in the block, including Union, Richfield, Mohawk, Gulf, Pan American, United Carbon and C. G. Glasscock.

Bakersfield contractor, Casey & Montgomery, is in charge of drilling, with A. T. Lemon toolpusher.

Albuquerque Leases

Checking elsewhere in New Mexico than at Four Corners, disclosed that The Texas Company had assembled more than 38,000 acres in Alameda Grant townsite and no great distance from Albuquerque. Exploration wells drilled in the area during past years have failed to come across commercial oil or gas.

In Southern Uintah County in Utah, Russ Havenstrite's oil company is drilling a wildcat on the 68,400-acre Ute Trail Unit.

The well, on a farmout from General Petroleum, Sun and Continental, is expected to explore to 6000 feet in the Wasatch formation.

Composed of the old Bitter Creek and South Ouray units, the Ute Trail Unit so far has given up two commercial gassers and one oiler.

The Texas Company, which plans to start building in the near future one of the largest radiation laboratories in the world at its research center in Beacon, New York, is hunting uranium through an affiliate in the southern part of the Colorado plateau.

Richfield Tests

Out-of-state activities of Richfield include Grizzly Valley No. 1 in British Columbia province, Canada. Casing has been set at 11,918 feet and the well is credited with excellent showings.

With Coastal Drilling Company of Bakersfield as contractor, Richfield's explorer on the Kenai Peninsula in Alaska is drilling ahead. Bud Fletcher is toolpusher.

Drilling is on a 71,000-acre block in which principal interest is held by Richfield and lesser stakes by Union and Ohio.

East Standard Corporation of Los Angeles, oil and mining firm, has widened its scope of activity by acquiring a mine and mill at Hamilton, Nevada. Known as the Belmont Mine and Mill, location is in White Pine County.

Ajax Oil & Development Company in Encino holds exploration interests in Knox, Stephens, Young and Baylor Counties, Texas, in the Denver-Julesberg Basin and other areas in Colorado and in Cheyenne County, Nebraska.

Reputation of California contract drillers is universal. International Brown Drilling Corporation of Long Beach is no stranger to field work in Turkey, Saudi Arabia, Bahrein Island, Kuwait-Saudi Arabia Neutral Zone, Australia, New Zealand, Trinidad and Venezuela.

Clyde Hall Drilling Company, which among other leading contractors calls Bakersfield headquarters,

(Continued on Page 19)

Petroleum LORE and LINGO

By RICHARD SNEDDON

At this stage without further parley we barge fearlessly into the polysyllabic domain of the exploration people. Here is a fertile field for the etymon hunter, for here are the propounders of jumbo type verbiage. Sequipedalians they have been called, and not unjustly, for a sesquipedalian is one who is addicted to the use of words that are a foot and a half long, from the Latin eesqui, "one and a half times," and pedes, "a foot." These are the earth scientists, the oil finders (they hope), and although their particular lingo is abstruse and incomprehensible to the uninitiated at first, after a little study it becomes quite intelligible.

Just as the medical doctor conceals the simplicity of his profession behind a superfluity of syllables, for example calling a black eye "a bilateral perorbital hemotama," so the geo-experts define a pebble "as a spheroidal fragment of paleozoic antiquity," and otherwise hide their secrets in heavily compounded Greek and Latin derivatives. With the aid of a good dictionary, however, any reasonably sharp layman can reduce their ponderosities to more palatable terms.

Petroleum is largely made up of several families of chemical compounds called "hydrocarbons" for the simple reason that they are composed of the two elements hydrogen and carbon. "Hydro" is of Greek origin and means "water." The suffix "gen" means "born" and as any schoolboy will tell you when water is decomposed hydrogen is born as one of the decomposition products so, as the sideshow magician would say, "Hence the pyramids of Egypt!" "Carbon" is from the Latin carbo, "coal" which is logical enough. It is interesting to note that "carbunolo" is from the same root and means "a little hot coal." If you've ever had one you will understand why.

The petroleum hydrocarbons belong largely to several well recog-

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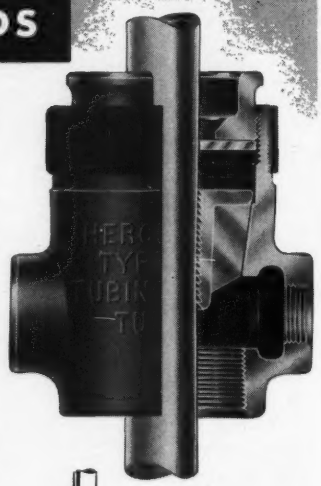

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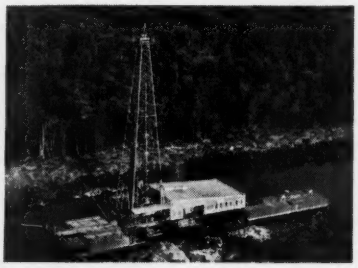

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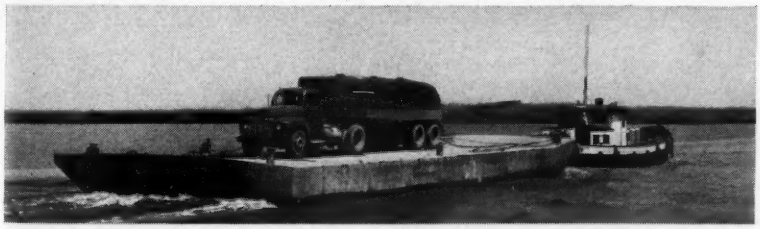

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nized families, principally the paraffins, naphthenes, aromatics and olefins. The paraffins are known as "saturated" hydrocarbons because in them is the maximum quantity of hydrogen with which their carbon atoms can combine. Being saturated they have no particular tendency to reach out and attach themselves to other stray elements and compounds and are consequently remarkably stable. This will be easy to remember if it is coincidentally remembered that paraffin is made up of two Latin words parum, "little" or "scarce" and affinis, "affinity." In gasoline, for example, the paraffins have no attraction for the unattached substances that can develop during combustion and are, therefore, not inclined to form the gummy, resinous materials that cause sticky valves and other such internal disorders.

The naphthenes are said by the chemist to be "cyclic" compounds, which merely means that their formulas fit into closed ring designs, from the Greek word kyklos, "a circle." We shall learn more of this anon, but for the moment leave us proceed with the narrative. The naphthenes take their name from the Greek naphtha which means "moist." That doesn't help very much, but naphtha was probably first used to describe some intermediate hydrocarbon between a gas and a liquid—either a moist gas or a gassy liquid.

The aromatics really do have a pleasing odor to justify their name which comes from another Greek source having to do with the scent of spices. The olefins, on the other hand, usually stink to high heaven and offend the olefactory organs, probosces, or schnozzolas no end, hence the name. They are relatively unstable but like the aromatics have in the main good antiknock quality.

The members of these hydrocarbon families range from the lightest gases, through liquids, to the most complex solids. Gases are commonly defined as "aeroform fluids" which is far from satisfying, and the word "gas" itself is said to be the brain child of a Belgian chemist, Jean Baptiste von Helmont, which is also rather unexciting. But when it is suggested that Jean's word is just a slurred version of the Greek chaos, used to convey the impression of incontrollability and abandon that the aeroform fluid conveyed to him, the imagination begins to be mildly stimulated.

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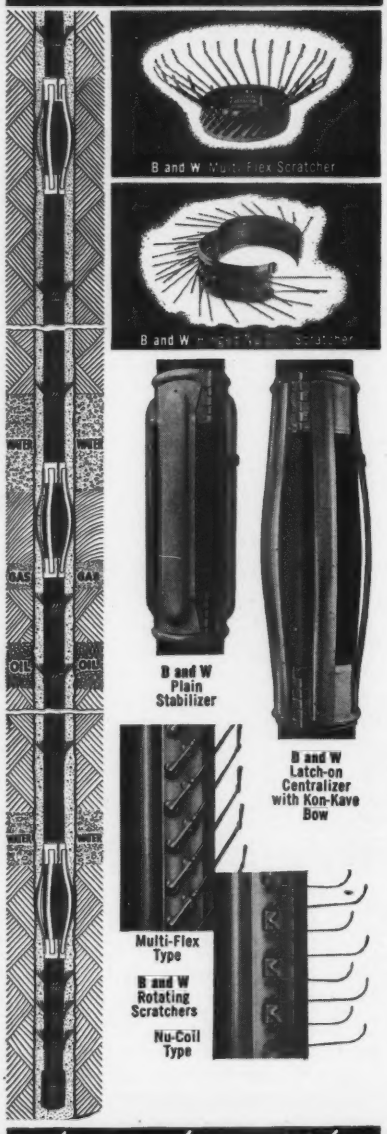
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The genesis or birth of petroleum has been the subject of much theorizing and considerable actual research. It seems now, however, to be fairly well agreed by the geobiologists and other earth scientists that it is generated from the remains of marine organisms (living creatures and plants, mostly the former) which have been buried under continuous deposits of sediment, laid down through countless centuries. As the superimposed layers have piled higher and higher, slowly increasing in weight, underground pressures and temperatures have mounted. Old mother nature has used these and other forces to generate from the organic accumulation, which contains the consistent element hydrogen and carbon, this complex stuff we call petroleum. The exact nature of the process or processes she employs is not known, but the attempt to find out has produced interesting data.

That word "data," incidentally, is one we swiped from the Romans. It is the plural of datum, "a fact" or "a piece of factual information," and should ordinarily take a plural verb. And going back slightly it might be noted that geo comes from the Greek ge, meaning "earth," so all the geo-scientists are specialists in some form of earth study. The geobiologist, mentioned in the last paragraph, gets the rest of his name from bios, "life" and logos, "the science of." He, thus, is a person interested in the science of life as it affects the constitution and behavior of the earth. It should perhaps be noted here that logos is a word of many meanings but the one applying in this instance is by far the most common. It is the one that prevails in all the ologies.

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nia, made it known as a result of a national research project, that in addition to chemical and physical forces, bacteria could be responsible not only for the generation but even for the migration of oil, in underground formations. Certain anaerobic bacteria, that is, bacteria which can exist without air (from an, "not;" aero, "air," and bios, "life"), are able to convert organic materials into petroleum or substances closely akin to it. Such bacteria are found deep in the earth and can survive abnormal pressures and temperatures.

The ones that may aid in migration are known as thigmotactic bacteria from the Greek thigmo; "touch," and taxis, "an order." These literally displace petroleum by pressing their little torsos against any surface to which it is adhering. It was thought that the pertinent types might be introduced into the oil zones to increase recovery. That would seem to be a pretty stiff assignment for a few bacteria but these fellows actually thrive in an oil medium and reproduce at a prodigious rate. I think I remember Dr. Zobell saying that if a single colony of bacteria could continue to propagate without loss it would in a very short time reproduce a mass of progeny as big as the earth. It is only the normal casualty incidence that keeps the little guys from taking over. Besides a bacterium, indeed, a rabbit is a multiplication sissy! "Bacterium," by the way, has a rather interesting origin. The first known ones were rod-like in appearance and the name was hence adapted from the Greek bakterion, "a small staff," and has since been applied to a wide range of micro-organisms, regardless of size or form.

The tiny marine organisms from which petroleum is believed to be at least partly derived are classified as protozoa, from the Greek protos, "first," and zoon, "animal." Excluding the hit-and-run driver, they are the lowest form of animal life. In favorable oceanic areas they occur in endless variety and in countless millions. When they have run their life-span, they drop to the floor of the sea and, where sedimentation is taking place, are eventually buried deep in the earth. There in the course of time the transmutation from protozoal remains to petroleum takes place, and then to make the treasure more difficult to find, nature goes into all sorts of cataclysmic tantrums.

Earthquakes wrench and contort the sedimentary beds into violent and freakish disarrangement; winds blow loose material this way and that; rivers and streams gouge out strange irregular channels in the earth's crust; and internal forces, physical and chemical, create havoc in a variety of ways. All of these make the reading of the earth's history from the rocks more difficult. Where the sedimentary layers remain undisturbed, a cross section has all the stratal regularity of a well baked layer cake, but in the terrestrial humps and certain other malformations, as we shall

learn, lie the greatest hope of the oil prospector (Latin pro, "for," specto, "to look." Upward thrusts, downward thrusts, and earth shifts of great variety create numerous types of fold in which oil may and does accumulate. In the words of George Gobel, however, "You can't hardly find that kind no more," not at least in California. The action of wind and water in transferring soil and rock from one place to another, incidentally, is known generally as "eroding." It comes from the Latin rodere, "to gnaw," the same root, by the way, from which we derive "rodent," a gnawing animal.

The petroleum that is brewed down in the subterranean (Latin sub, "under," terra, "earth") laboratories somehow either migrates to or is originally formed in favorable areas and there is held in porous rocks. It is imprisoned in the porous medium by an overlying stratum of impervious material such as shale or heavy limestone, known as the "cap rock," and usually by an underlying stratum of salt water. And there we have the thing that has excited more gamblers than the slot machines at Las Vegas, . . . an oil reservoir! Please note that stratum is another word that we purloined, without change, from the Romans. It means "a layer" and its plural is strata which must not be used with a singular verb. "Impervious" is a compound of Latin im, "not," per, "through," and via, "way," so if it is impervious, there is no way through it.

Contrary to the quite popular belief, oil is not found trapped in large caverns, and it doesn't under normal circumstances leave a big hole down in the ground when it is removed. As a matter of fact the sub-surface oil reservoir is normally a body of pretty solid looking rock. It is not solid, however, but consists essentially of compressed sand grains, with interstices or spaces between grains (Latin inserstitium, "something that stands between") into which migrating petroleum can creep. In other words, the sand is permeable which is just the opposite of "impervious," defined in the preceding paragraph, and oil can, therefore, move through it. That is the difference between "permeability" and "porosity." A piece of rock, such as pumice or lava, may have lots of pores, each completely isolated from the others so that there is no way through. Even if petroleum were lodged in the small pockets in such a formation, the yield in a well drilled into it would be small indeed, unless some means could be found of rupturing the rock walls that stand between pores. That is why the oil chemist is more concerned with "effective" porosity instead of the absolute or total pore volume.

It might be noted that nature gives up its petroleum hoard very reluctantly. The little spaces in which the oil is stored are usually interconnected by small channels some bigger in diameter than a hair and hence called capillaries from the Latin capullus, "a hair." In these little channels there develops a very special affinity be-

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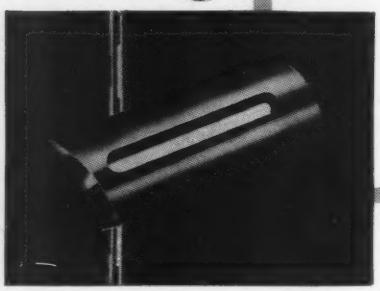

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tween the walls and the fluid and the pair are not too easily separated. This is because of the phenomen, known as surface tension. All fluids have a natural tendency to form into spheres like frightened hedge-hogs. When, for example, medicine is expelled from an eye-dropper, this inclination can be plainly seen.

When in contact with various surfaces this tendency is weakened in greater or lesser extent, depending on the nature of the surface and the viscosity of the fluid. Thus, the layer of fluid molecules that lie immediately adjacent to the rock face is affected on the exposed side by forces that counteract the sphere forming yen, and they become rather firmly attached to the face. The succeeding layers, of course, are only exposed to each other and are free to tumble over and under each other with their usual abandon. It is quite obvious that in the extremely small capillary channels where the proportion of exposed to unexposed fluid is much larger, it will be held more tightly. This explains why a considerable portion of the oil in the sand formation is not recovered by the ordinary process of drilling. Every sand grain in the entire underground reservoir is coated with it and the little channels, too, hang tenaciously to their surface quotas, so only the free flowing liquid comes voluntarily or is pumped to the surface.

The word "viscosity" is one that has great significance in many oil industry operations. It comes to us from the Latin viscum, "mistletoe." If a mistletoe berry be squeezed it exudes a sticky juice and viscosity is simply "stickiness" or "resistance to flow." "Mistletoe" is said to be derived from the Saxon mysteltan which is composed of the Danish mystel, "birdlime," and tan, "a twig." This recalls the fact that fifty years ago more or less, boys in Scotland used to spread birdlime, made from mistletoe berries, on tree limbs, hoping thereby to catch unwary sparrows. As one of said boys, the writer must confess that he never caught any sparrows but found a thrill in the adventure that made it exciting nevertheless. Mistletoe, incidentally, has another remote relation to oil in that it is the State flower of Oklahoma.

Porosity technically is usually expressed as a percentage of total volume. In other words, if the effective porosity of an oil sand core is reported as 25%, this means that one quarter of the total volume of sand consists of interconnected interstitial or pore space. Permeability is recorded in millidarcys or thousandths of a darcy, a unit that was defined by the physicist, Henry D'Arcy. It is a measure of the rate of flow through a porous medium under accurately stipulated and carefully controlled conditions. It is planned to discuss measurements generally in a subsequent chapter, at which time the author will attempt a more explicit treatment of some of the terms that have so far cropped up and which to this point have been dismissed somewhat casually.

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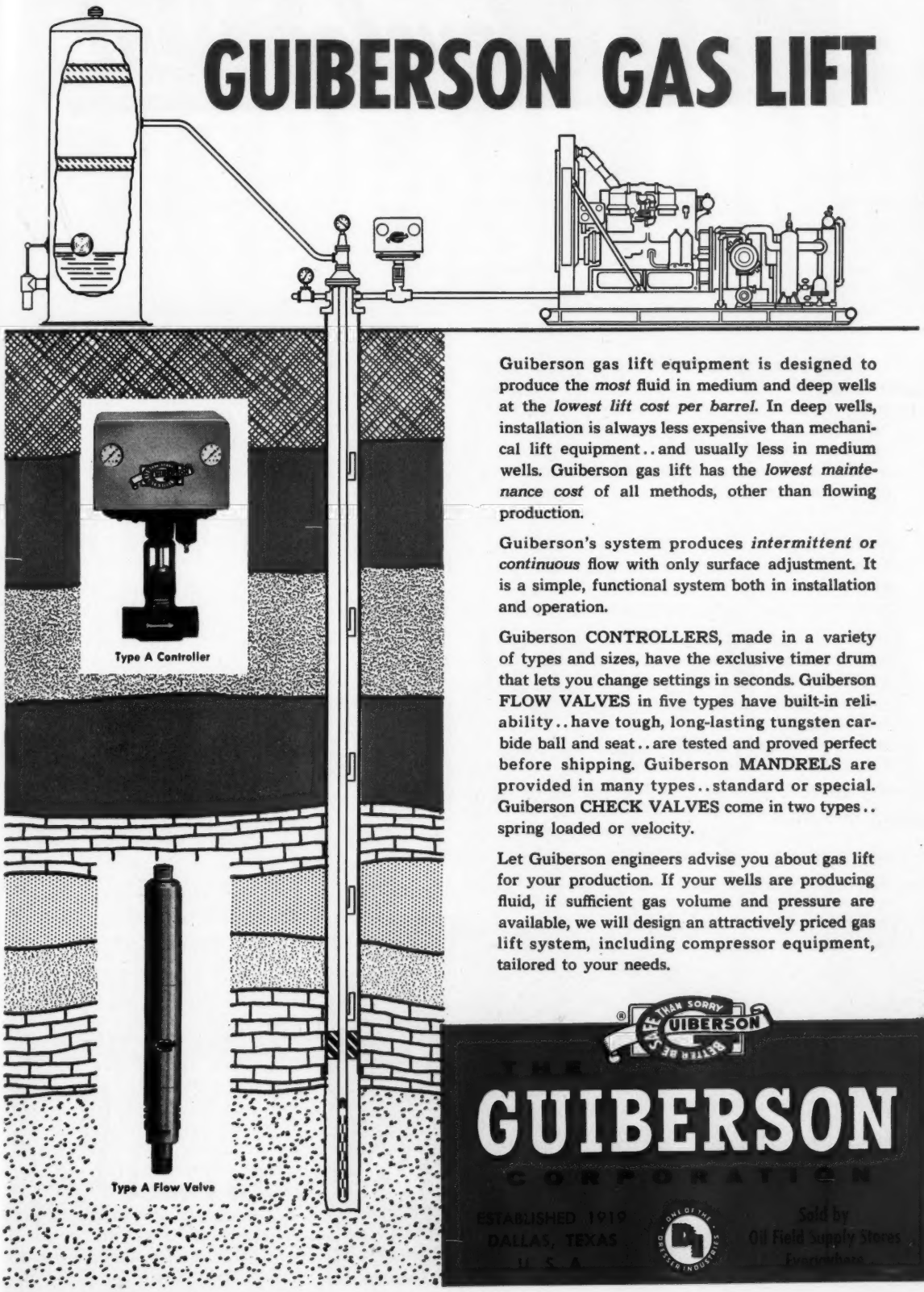

Guiberson gas lift equipment is designed to produce the *most* fluid in medium and deep wells at the *lowest lift cost per barrel.* In deep wells, installation is always less expensive than mechanical lift equipment.. and usually less in medium wells. Guiberson gas lift has the *lowest maintenance cost* of all methods, other than flowing production.

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Field Development

Malibu Slated For Drilling

Western Gulf Oil Company is approaching the spudding-in stage with an approximate 7500-foot wildcat test on Section 19-1s-19w in the Malibu area of Los Angeles County.

Mahala Field Well Gives Up

James Michelin as operator has abandoned Abacherli No. 12 well on Section 12-3s-8w in the Mahala field in San Bernardino County. The project was taken first to 2809 feet and then redrilled to an unproductive 2197 feet.

Prado Dam Try Abandoned

After first going to a total depth of 4490 feet and then redrilling without commercial success to 3220 feet, C. D. Howe has abandoned Wilcox No. 1 explorer on Section 18-3s-7w at Prado Dam in Riverside County.

Rio Bravo Test Scene

The Rio Bravo area in Kern County is the setting for Dickinson No. 1 test sponsored by West Texas Oil Corporation on Section 22-28s-25e, Kern County. The Rio Bravo field was discovered by Union Oil Company in November, 1937.

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Yorba Linda Location Made

L. E. Swanson has location staked for Neverending No. 1 well on Section 21-3s-9w in the Yorba Linda field, Orange County. In the Ocean View area, drilling has been suspended at 4225 feet with Cadillac Oil Company's Hoff No. 1 on Section 26-5s-11w. Elecric log was run and the well sidewall sampled.

Pyramid Hill Wildcat Digs

Universal Consolidated Oil Company is near objective depth of 1500 feet with its shallow test on Section 8-24s-18e in the Pyramid Hills area in Kings County. Philadelphia Oil Company is drilling No. 1-31, a stratigraphic test on Section 31-24s-18e.

Edison Well Written Off

Watkins-McFarland has pulled out of its test well on Section 3-30s-29e at Edison in Kern County. The well was drilled and cored to a total depth of 1337 feet, with top Santa Margarita sand at 1300 feet.

Mendota Explorer Drilling On Down

Southwest of Mendota townsite in Fresno County, Coleman L. Caine, Operator, is drilling near 1500 feet with No. 1 test on Section 23-14s-13e. Surface pipe was cemented at 502 feet. The well, which lies about three miles north and east of a well that was completed in 1941 and failed to endure as a producer for Jergins Oil Company, is in the vicinity of the Cheney Ranch. Target depth of the current venture is 10,000 feet. In the Lanare sector of the county, Bankline Oil Company's Hawn No. 1 on Section 24-17s-18e is going ahead near 1000 feet. Standard Oil Company, Oper-

J&L EXTREME LINE CASING

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- High strength joint
- 100% leak resistant

J&L Extreme Line casing meets the challenge of your toughest deep well problems. Check the unusual advantages of this new J&L casing available in grades J-55, N-80 and P-110. Produced under license from The National Supply Co. Write to Jones & Laughlin Steel Corp., 3 Gateway Center, Pittsburgh 30, Pa.

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ator, Lillis No. 332-18J on Section 18-21s-17e at Kettleman Hills is growing deep, with depth last reported below 11,500 feet.

Poso Creek Test Abandoned

Having cored basement rocks, A. S. Mayes & Associates has abandoned at 4656 feet its Vedder No. 1 test on Section 2-27s-27e in the Poso Creek-McVan area in Kern County.

Lamont Wildcat Location Made

Victory Oil Company, Operator, plan to drill some 13,000 feet with Lamont No. A-1 wildcat well, staked on Section 6-31s-29e at Lamont in Kern County.

Lindsay Wildcat Goes On Production

The Fred Gill & Sons, Inc. Keely No. 2 wildcat test on Section 24-20s-26e in the Lindsay sector of Tulare County has been given the final touch at 1204 feet. Representative gauge is not yet available at this writing. The well is located about 110 feet south of a test previously undertaken by the same operator to 1212 feet, which is now idle after pumping water with a trace of oil. Some years ago the Bureau of Reclamation picked up oil shows while coreholing for water in the area. This prompted ensuing oil interest.

Tejon Ranch Test Drilling On Down

Reserve Oil and Gas Company's Reserve-Butler-Wehr No. 388-18, the sequel to its discovery well finaled last March, is drilling ahead below 3600 feet on Section 18-11n-19w on the Tejon Ranch in Kern County. Location is some 1500 feet south and east of the discovery well, with No. 388-18 bent on going to the Zemmorian zone and the Vedder sand, where the discovery was scored. The discovery well was finaled for 240 barrels of 33 gravity oil a day through a 20/64-inch orifice. Coastal Drilling Company is taking down the Reserve test. Richfield Oil's Tejon A No. 2, a new well in the Tejon Ranch field on Section 32-11n-19w, is in from 7832 feet for a current yield of 355 barrels of 38.4 gravity oil and 422,000 cubic feet of gas a day.

Shell Plans New Vallecitos Work

Shell Oil Company is ready to drill its Breckenridge No. 31-35 wildcat test on Section 35-16s-10e in the Northwest Vallecitos sector in San Benito County. Location is about two and one-quarter miles northwest of production and midway between the company's Humble-McDonald No. 48 and Olds No. 23. These earlier test wells were three-eighths of a mile apart and went into discard at 4510 and 945 feet, respectively, during the last two years. On Section 28-16s-11e at Vallecitos, Beach, Church & Bell is drilling below 2000 feet with Ashurst No. 78X-28 wildcat. Approximately one-half mile southwest of this drill site, Franco Western Oil Company put down its Ashurst No. 52A-33 and completed the well last December as a discovery of 40 barrels of oil a day from 3313-3338 feet. On Section 12-17s-11e, Robert S. Lytle is under way with Ashurst No. 42X-12 on Section 12-17s-11e. In the Hollister sector, the Ferry Morse No. 1 on Section 20 and Hudner No. 1 on Section 19-12s-5e are idle at 5015 and 931 feet, respectively. The operator of both wells is Petrolex, Inc.

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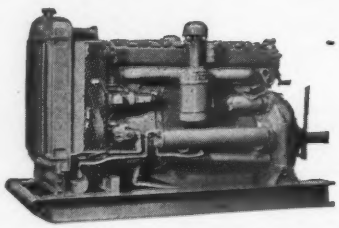

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Mountain View Wildcat Works

Drilling was delayed by a fishing job at 3028 feet with McCulloch Oil Exploration Company's McCulloch-Di Giorgio No. 2 wildcat on Section 10-31s-29e. The company's McCulloch-Kern No. 1 on Section 16-30s-28e has been abandoned at 7016 feet.

Jasmine Oil Set To Drill

Some 4400 feet north and 1500 feet west from the southeast corner of Section 15-25s-27e in Kern County and north of Jasmine field production, Jasmine Oil Company will drill No. 68-15 test well. Engineering is being handled by Bob Quinn.

Blackwells Corner Wildcat Abandoned

Abandonment has come about at 3980 feet with Mabury No. 3 wildcat well, taken down by William M. Keck Jr. on Section 26-26s-18e and about two miles west of production at Blackwells Corner in Kern County. The abandoned well was a like distance south from Shale Point where a year ago Beach, Church & Bell discovered gas from the Avenal sand with Scherrer No. 1 project. Keck subsequently drilled southeast of the gas find and also chalked up new gas production.

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Allensworth Wildcat Digs

Ajax Oil & Development Company, which is identified with oil development in California, Texas, Oklahoma and Colorado, is drilling ahead with its interesting wildcat well on Section 11-24s-23e in the Allensworth area, Tulare County.

Summerland Offshore Core Hole Abandoned

Standard Oil Company of California and Humble Oil & Refining Company have abandoned their Core Hole No. 2 on projected Section 31-4n-25w, offshore Summerland in Santa Barbara County. Total depth was 7387 feet. The first well was taken to 8438 feet and also abandoned as pointing toward nothing commercial. The play is on a lease which was made by the combine under terms of the Cunningham-Shell tideland act, passed by the Legislature. Standard-Humble paid a bonus of more than $7,000,000, in addition to 12½ per cent royalty.

Santa Ynez Wildcat Staked

Hancock Oil Company has made location and is preparing to drill its Mitchell No. 15-29 wildcat test on projected Section 29-6n-30w in the Santa Ynez area in Santa Barbara County. Last March the company gave up at 3130 feet its Mitchell No. 24-29 well on the section.

Bardsdale Test Flies Union Banner

Union Oil Company is preparing to drill directionally some 7000 feet with its forthcoming San Marino-Robertson No. 28 wildcat test on Section 1-3n-20w in the Barsdale area of Ventura County. South of the Bardsdale field proper, Western Gulf Oil Company will drill Johnson No. 1 wildcat to approximately 7000 feet on Section 24-3n-20w.

Ojai Test Under Way

Matilia Oil Company of Santa Barbara is engaged in preliminary work on its Scott-Government No. 1 wildcat well on Section 1-4n-22w near Sisquar Creek production in the Ojai field, Ventura County. The Texas Company will drill to some 10,000 feet with its Sloan No. B-1 test on Section 32-4n-18w in the Torrey Canyon sector. Haney & Williams has the contract to do the work.

Camulos Ranchos Well Redrilling

On the Camulos Rancho in Ventura County, Union Oil Company at last reports was redrilling at 8000 feet with its N. L. & F. No. 3 wildcat well on Section 25-4n-18w. The well, which was drilled first to 11,512 feet, is being guided by Loffland Bros., contractor.

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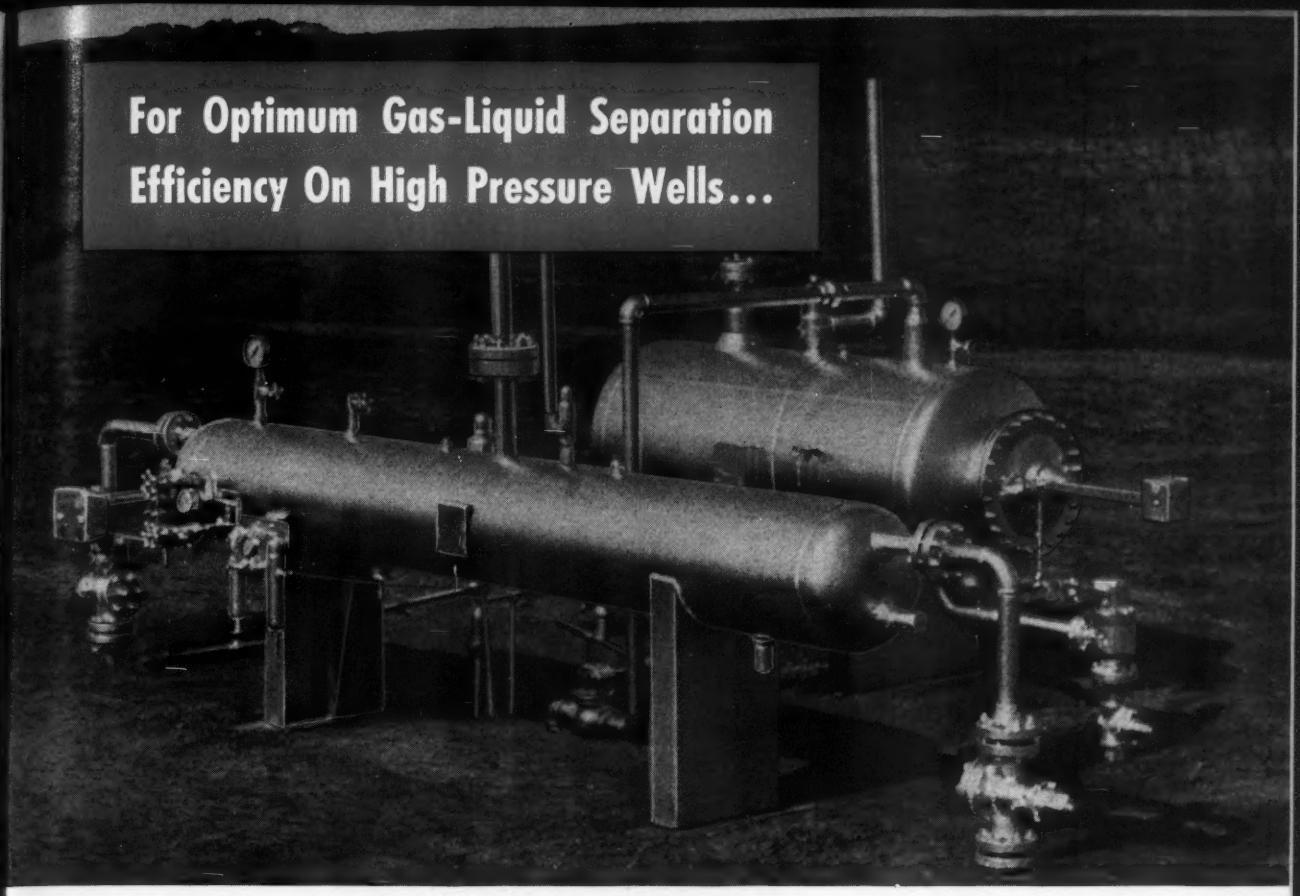
South Mountain Well Wildcatting

Drilling is continuing ahead at a depth below 2000 feet with Humble Oil's Mary A. Russell et al No. 1 wildcat on Section 29-3n-20w on land southeast of South Mountain, Ventura County. The company's Charles E. Johnson No. 1 on Section 30-4n-18w, southwest of Piru, is drilling at 5500 feet. Camay Drilling Company is contractor on the former, and Loffland Bros., on the latter.

La Honda Well Drilling Ahead

United Cuban Oil Inc., headed by Ted Jones, which owns production in Cuba, is drilling ahead several hundred feet down with Muller No. 1 well on Section 17-7s-4w in the La Honda area in San Mateo County. The project is the first drilling effort of United Cuban Oil in a long range program of oil development in the United States. Two additional wells are planned by the company in the United States within the next 90 days, also offset wells to Muller No. 1, in the event the latter venture proves capable of commercial production. Neaves Petroleum Developments' Neaves-Stanton No. 1 wildcat on Section 16-7s-4w is idle at 2657 feet. The same situation exists with the company's Neaves-La Honda No. 5 on the section, an old well, which was deepened from 1263 feet to 1800 feet. The project originally flew the banner of the Pomona Tile Manufacturing Company. In the Slate Creek sector, Western Gulf Oil Company's Western Shore No. 1 exploratory well on Section 16-8s-3w is drilling near 3600 feet. When drilling reached 2899 feet, the project was plugged back to 2622 feet, whipstock set and redrilling initiated to straighten hole. Over in Santa Cruz County, Custom Drilling Company's Nord No. 1 wildcat test on Section 9-9s-2w in the Santa Cruz area has moved in larger rig, following technical spud on down several hundred feet. In Tehama Coun-



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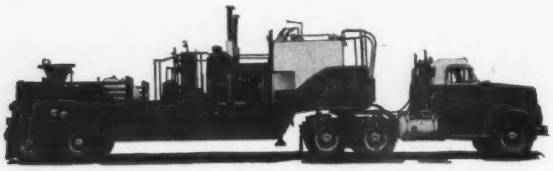

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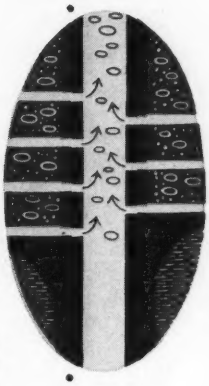

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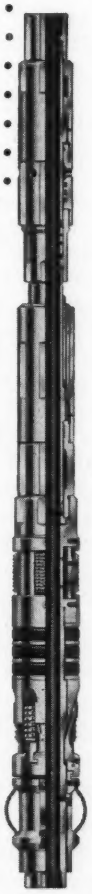
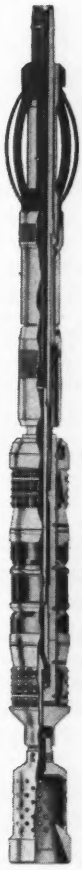


RTTS (RETRIEVABLE TEST-TREAT-SQUEEZE) PACKER

HYDRAULIC RETRIEVABLE CEMENTER



"DM"—"DC" SQUEEZE PACKER

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ty, Humble Oil & Refining Company is ready to drill its C. C. Flournoy No. 1 wildcat project on Section 12-24n-5w in the Flournoy area.

Reserve Completes Oxnard Field Well

Reserve Oil & Gas Company has completed its Duntley No. 1 well on Section 1-1n-22w in the Oxnard field in Ventura County for an initial output of 1176 barrels of clean oil through a 20/64-inch bean from a total depth of 6519 feet. The well, on an 85-acre lease in which the company holds the entire working interest, is tapping the Sespe at intervals of 6380-6425 feet, 6435-6475 feet, and 6495-6518 feet. Last reported rate of production was 359 barrels of 24.5 gravity oil through a 12/64-inch orifice. The well was drilled on contract by A. D. Rushing Drilling Company. Standard, Texaco and Lloyd are among other operators currently active in the field.

Springdale Test Abandoned

In the Springdale Dome sector of Ventura County, Bandini Petroleum Company's Beardsley No. 3 wildcat venture on Section 29-2n-21w has been abandoned at a redrilled depth of 9621 feet. Originial bottom was 9637 feet.

Sulphur Mountain Wildcat Drilling

Drilling is near a depth of 1000 feet with Nealy Exploration Company's Delpy No. 2 on Section 24-4n-22w at Sulphur Mountain in Ventura County. Contractor is Stevens Drilling Company.

Butte County Wildcat Fails

Wet on test, Ruth L. Lundeen Guardian et al No. 1 wildcat project on Section 19-18n-2e at West Biggs in Butte County, has been abandoned by Humble Oil & Refining Company at 3900 feet.

King City Test Well On Calendar

Two miles west of King City, Marport Oil Company has staked location for its Marport-Mozzini No. 1 wildcat test on Section 13-20s-7e, Monterey County. Geology is in the hands of Dick Thorup. The Texas Company's Aurignac (NCT-L) No. 29 explorer on Section 5-23s-10e in the San Ardo area is drilling ahead above objective depth of 6500 feet.

Thomes Creek Wildcat Quits

Western Gulf Oil Company has pulled out at 4500 feet from its Thomes Creek Unit A No. 1 wildcat venture on Section 36-25n-4w in the Thomes Creek sector in Tehama County.

Bell's "Springs" Operations Widened

Bell Petroleum Company announces that it has become operator of all wells located on its property at Santa Fe Springs. It was noted that this operation includes more than 70 wells in the established zones of the field along with three now producing from the deeper Santa Fe zone. Representing a material expansion in Bell operations, the company, in addition to Santa Fe Springs, owns production at Castaic Hills, South Cuyama and west-central Texas. If gasoline and related products are included, Bell said that company operations now account for approximately a net of 3000 barrels of oil a day in excess of 31-degrees gravity. President Alphonzo E. Bell indicated that some time will be given over to studying secondary recovery possibilities at Santa Fe Springs. If the analysis points to a promising situation, hope has has been expressed that ultimate recoverable reserves will be substantially increased over those now recognized to exist.

Texaco Completes Athens Oil Pumper

Near Hoover and 132nd streets on Section 18-3s-13w in the Athens-Rosecrans area, Los Angeles County, The Texas Company has completed its Howard Park No. 1 extension test for 140 barrels of 31.5 gravity oil, cutting initially 34 per cent, and 49,000 cubic feet of gas a day. Total bottom is 9662 feet. Intervals open to the pump are 7658-7968 feet, 8041-8190 feet and 8525-9140 feet. K. L. Kellogg & Sons was contractor.

Navajo Reservation Explorer Spudding Due

Davis Oil Company is about to spud-in its interesting wildcat well on a farmout from Magnolia Petroleum Company on the Navajo Indian Reservation in San Juan County, New Mexico. Location is about seven miles east of Burnham's Trading Post and approximately the same distance northeast of a 4600-foot duster which Sinclair Oil & Gas Company drilled some months ago to the Morrison formation. It is reported that Amerada Petroleum Corporation and Humble Oil & Refining are "dry hole" contributors to the project.

Hatch Wildcat Goes Off Board

After looking all formations over to 6425 feet, Halbert & Jennings of Denver has pulled out of its L. N. Hagood wildcat test on Section 15-38s-23e in the northeast Hatch sector in San Juan County, Utah.

Shell Oil Plans Two More Ventures

Shell Oil Company has filed with the Utah Oil and Gas Conservation Commission intention to embark upon two more development wells in San Juan County. Bluff Unit No. 23-4 will be put down on Section 4-40s-23e in the Bluff Pool sector, and North Desert Creek No. 23-13 on Section 13-41s-23e in the North Desert Creek sector. The company opened up Desert Creek to production back in 1954.

Mohave County Wells Starting

Two test wells in northern Mohave County, Arizona, are at the starting line. They are Western Drilling Company-Valen Oil and Minerals Corporation's Federal No. 1 on Section 1 on Section 31-38n-5w, and T. Lyons and P. Poteet's Federal No. 1 on Section of 14-39n-6w. The former is a scheduled test of the Toroweap structure to 5000 feet. The latter will go to some 2500 feet. In Cochise County, Southwest Oil Corporation's exploratory venture on Section 5-21s-24e is drilling

below 2000 feet on land southeast of Tombstone. In Yuma County, where test wells have already been drilled in past years south of the City of Yuma and in the Valley, leasing appears on the upgrade. The present activity lies north of Yuma and west of Dome.

Walker Hollow Project Drilling

Carter Oil Company, which is in the forefront of exploration and development drilling at Four Corners, is drilling a development well at Walker Hollow field in Uintah County, Utah. The well, on Section 7-7s-24e, marks the company's return to drilling in the area following a field development recess.

Shiprock Wildcat Drilling Steadily

Approximately 12 miles southeast of Four Corners and half that distance northwest of Shiprock, Pan American Petroleum Company is drilling ahead at an inclusive depth in northwestern San Juan County, New Mexico.

Rex Uranium Clicks With San Juan Test

South of Farmington by slightly less than 10 miles, Rex Uranium Company has put on production its Douthit No. 1 in San Juan County. The project, on Section 8-27n-13w, was drilled to 5484 feet and casing cemented without tests as oil and gas showings of promise were cored in the Gallup zone. The well, on a farmout from Delhi-Taylor Oil Company, is eight and one-half miles north of Bisti field production. Representative gauge of the Douthit project is not yet available at this writing.

Mountain Fuel Drill San Juan Wildcat Test

Mountain Fuel Supply Company is drilling at a relatively shallow depth with its Mountain Fuel Supply-Federal No. 1 on Section 13-37s-18e in the San Juan County part of the Paradox Basin. The drill is no great distance from Pan American Corporation's unit.

California Operators

(Continued from Page 1)

has shipped a complete oil drilling outfit to Turkey. It was unloaded at Iskenderun port and then was transported on by railway to virgin wildcat territory where Turkish-American Oil Company has a drilling program scheduled.

Gulf Coast

Signal Oil and Gas Company and Hancock Oil Company hold valuable properties at Lake Charles, Louisiana, where they recently turned up a major discovery on a substantial tract of land.

In the Ship Shoals area in the Gulf of Mexico, Signal and Hancock each has a quarter interest in another 5000-acre tract, containing a number of producing wells.

These same California companies are associated with oil activity at various stages at Lake Maracaibo in Venezuela. Signal in its individual right owns 850,000 acres in Guatemala.

Great Lakes Oil & Chemical Company of Los Angeles, which maintains headquarters of its chemical division, Great Lakes Chemical Corporation, at Filer, Michigan, is showing steady expansion in all directions, with tentative plans calling for oil work in states new to company drilling.

In passing, it is worthy of record that Great Lakes earned $70,553 after all charges for the four months of 1957 ended April 30 as against a loss of $24,967 during the comparative period of 1956, and a profit of $67,106 for the 12 months ended December 31, 1956.

Southern California Petroleum Engineers Plan Fall Meeting

The Southern California Section of Petroleum Engineers of AIME will holds its Annual Fall Meeting in Los Angeles, October 17 and 18, according to D.G. Kingman, Chairman of the group. The two day session will be held in the Biltmore Hotel and will be co-sponsored by the San Joaquin Valley Section and the California Coastal Sub-Section. Chairman of this year's meeting is T. A. Atkinson, Douglas Oil Company and the Program Chairmen are C. F. Gallagher of Schlumberger and W. E. Bourne of Amerada Petroleum Corp.

Approximately 25 papers will be presented during the two day session and will feature Reservoir Engineering Petroleum Economics, Production Operations, Drilling and Logging, and Secondary Recovery. The Annual Business Luncheon will be held on the 17th and the Cocktail Hour and Dinner Dance are scheduled the night of the 17th.

The other Chairmen for this year's meeting are: Arrangements, Ray Elner of Kobe, Inc.; Exhibits, L. W. Chasteen of Union Oil Company; and Dinner Dance, Tom Morton of Halliburton Oil Well Cementing Co.

President W. T. Nightingale of Mountain Fuel Supply Company has been installed as president of the Rotary Club in Utah. He is widely known in oil and other business circles.

G. R. Winder, Chiksan Company vice president and general sales manager, is the new president of the Sales Executive Club of Orange County. He succeeds Robert Stanslow.

Robert O. Patterson, Bert P. Dunn and Arnold Jue are principals of the new Pacific Oil Well Logging Inc. organization.

Four Bakersfield members of Standard of California, Western Operations, Inc., were guests of honor at a dinner given in the Kern County oil city by C. G. Wood, Fresno regional manager for the company. A. H. Thomas was the recipient of a 40-year service pin, and J. R. Monroe, a 30-year service pin and gold watch. The presentation was made by Wood. Esther Miller and J. H. Williams, respectively, were given 10-year service pins by H. J. Duffy, regional accounting office manager.

Aileen Whitney, who was recently installed as the president of the Desk and Derrick Club in Bakersfield, will represent the Kern County oil city as delegate to the annual Desk and Derrick convention to be held in Chicago, August 30-31.

Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

New Mexico

Pan American Petroleum Corp. has staked location for a deep test in northwestern San Juan County and west of any previous drilling in the county. The wildcat will be on the No. 1 Navajo-B, nw se nw 10-31n-19w, and is scheduled to go to the granite. Humble Oil and Refining drilled a Pennsylvanian discovery, the No. 1 Navajo-B, c nw sw 29-32n-2w, nine miles northwest of the Pan American venture.

Southern Union Gas has been running tests at an attempted confirmation of a Gallup discovery in Rio Arriba County. The Southern Union well is the No. 1 Dunn, nw se se 9-23n-7w, which has been drilled to 5838 feet total depth. The discovery in the area, the No. 1 Dunn, c sw sw 10-23n-7w, was drilled by Harrel Budd and completed for pump production of 47 barrels of oil per day.

What is believed to be the biggest shallow producer in the San Juan Basin has been brought in by El Dorado Refining-Petro Atlas at the No. 1 A in Horsehoe Canyon, San Juan County, for production of 984 barrels of high gravity oil per day. The discovery well of the Horseshoe Canyon pool was drilled last year on a farmout from Arizona Exploration and five other shallow producers had been drilled prior to the most recent discovery. These wells, however, have averaged only 50 to 100 barrels of oil per day, and the El Dorado-Petro Atlas No. 1-A has created something of a sensation because of the large production for a shallow well. Top of the Gallup, where the production was encountered, was logged at 1600 feet, and the well was drilled to 1750 feet total depth. On a swab test it flowed at the rate of 41 barrels of oil per hour.

Humble Oil and Refining Co. has installed pump at the No. 1 E-Ka-Ne-Pah, c sw nw 27-24n-8w, San Juan County. The well swabbed nine barrels of oil and 34 barrels of salt water in a 24-hour test of the interval 4114-16 feet. It was drilled as an offset to the discovery, the No. 1 Federal-Sapp, c ne ne 28-24n-8w, drilled by Haynes-V. T. Drilling.

Southern Union Gas recovered a flow of gas at the estimated rate of 35,000,000 to 70,000,000 cubic feet per day at the No. 5 Nordhaus, ne sw sw 12-31n-9w, San Juan County. Production was obtained at 4635 feet, when the well blew out at that level. The formation has not been announced.

Frontier Refining swabbed 59 barrels of oil in a 25-hour test of the No. 1 Walker, c nw ne 5-26n-12w, San Juan County. Recovery was made through perforations at 5011-39 feet, with log tops not yet announced. The same operator is preparing to complete the No. 1 Govt.-Chartier, ne sw sw 4-26n-12w, San Juan County. Oil shows were found in the Gallup, which was topped at 4790 feet.

Arizona

Kerr-McGee Oil Industries Inc. is preparing to test at the No. 4 State, nw sw ne 32-20n-26e, a wild-

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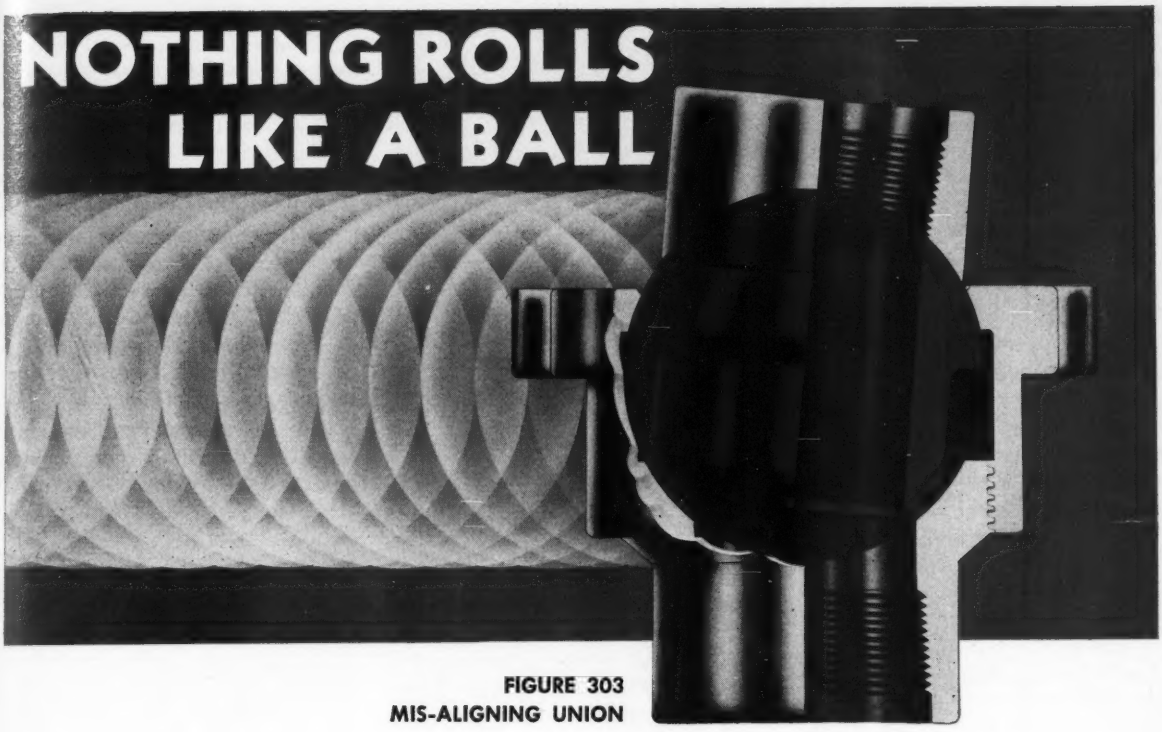

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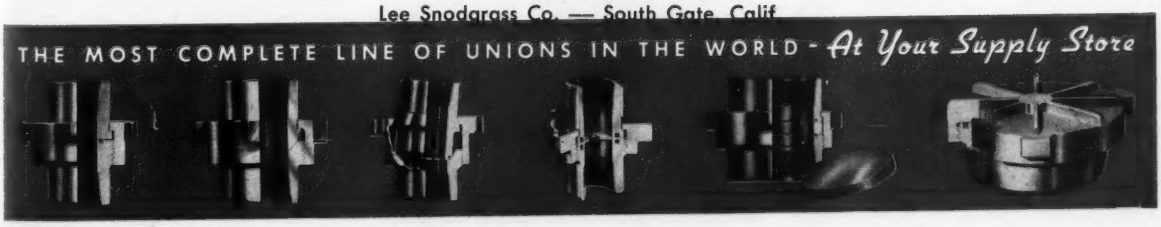

cat in Apache County in the northeastern part of the state. This was scheduled as a Coconino test at 1200 feet, but the objective formation ran higher than anticipated and was logged at 828 feet. Operator set casing at total depth of 950 feet in preparation for test. Kerr-McGee's wildcat in the Pinta Anticline area, the No. 1 Govt., nw ne sw 34-20n-26e, still is on location, according to latest information.

No announcement has yet been received concerning the nature of the gas which Kerr-McGee recovered at the No. 2 Fee, 35-20n-26e, Apache County. This was scheduled as a Coconino on the Pinta Anticline, and the objective was topped at 952 feet, again higher than anticipated. The gas flow was estimated at 10,000,000 cubic feet per day and the well was drilled to 1010 feet total depth and shut in.

In Cochise County, Duncan et al have abandoned an old well which they were working over, the No. 1-X State, se ne se 33-13s-22e. This well originally was drilled to 5301 feet total depth late in 1955. In the workover operation it was plugged back to 2300 feet and perforated at 2164-79 feet and fract, later plugged to 1650 feet, perforated to 1600-10 feet and fract.

Roger A. Fields has run surface casing to 210 feet and is preparing to drill ahead at the No. 1 Federal, sw sw sw 17-38n-7w, Mohave County. This wildcat is scheduled as a 1500-foot Coconino test.

T. W. George found water in the Chinle and Shinarump at the No. 1 Word, c nw sw 12- 40n-6w, Mohave County. Latest top reported was the Toroweap at 1970 feet. No tests have been reported.

Utah

Oil recovery at the rate of 1450 barrels per day was accomplished in a recent test of Shell Oil Co.'s No. 1 Tohonalda, w½ sw sw 35-41s-21e, San Juan County. Recovery was through perforations at the interval 4990-5050 feet, through 48/64 inch choke, and following acidizing. The same well some time ago had yielded oil at the rate 528 barrels per day on a drill stem test. The most recent production rate was obtained while swabbing, the well kicking off during the operation. There also was a flow of gas at the rate of 1,200,000 cubic feet per day. The well marks another success for the important Paradox Basin and is the farthest west production to date in that area.

In the northern part of the Paradox Basin, Kerr-McGee Oil Industries is drilling a Mississippian test at the No. 1 TP-Utah-27, c se ne 7-23s-13e, Emery County. Objective is expected at about 3500 feet. Kerr-McGee is drilling the wildcat on a farmout from Texas Pacific Coal and Oil. Operator has additional acreage in the area.

Paradox Production and Putnam and Smoot are continuing drilling at their No. 1 Federal, c nw ne 34-30s-13e, Wayne County, and were last reported around 3700 feet. On a drill stem test at 3504-22 feet, gas was recovered at the rate of 380,000 cubic feet per day. Fluid recovery was 710 feet of water in the four-hour test. A later test was run at 3618-78 feet with a showing of oil found.

Americana Petrofina and English Oil have shut in a recently completed gas producer for market. The well, the No. 1 State, c ne sw 22 20s-7e, Emery County, flowed gas at the rate of 1,300,000 cubic feet per day through perforations at 625-640 and 695-720 feet. Production was obtained from the Ferron, topped at 600 feet, and the well was drilled to 1700 feet total depth.

Skelly Oil was waiting on cement at the No. 1 Parks, c ne ne 19-38s-24e, San Juan County, after running pipe to 6208 feet. A drill stem test at 5931-84 feet recovered 750 feet of oil cut mud. Cores previously taken also had oil shows.

Gulf Oil has staked location for the No. 1 Wonsits-Federal, which is spotted in c sw nw 1-8s-21e, Uintah County. It will go to 6500 feet.

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Colorado

McKnab Drilling has set production casing to 5896 feet at the No. 1 Jess, c sw ne 14-4n-58w, Morgan County, after recovery of gas at the rate of 1,500,000 cubic feet per day on a drill stem test of the D sand. The test was taken at 5818½-28½ feet and also yielded 90 feet of distillate and 270 feet of water. The well is on a 240-acre farmout from Lion Oil Co.

Phillips Petroleum is coring below 16,650 feet at its No. 1 Mannel, nw nw ne 27-1n-95w, Rio Blanco County. Several cores thus far taken have failed to yield shows.

In Weld County, Shell Oil abandoned the No. 1-4728 Federal, c nw se 18-10n-56w. The well was drilled to 8859 feet total depth.

Frontier Development will drill an Entrada test at the No. 1 Wynkoop, sw se nw 36-2n-3w, Mesa County. It will go to about 1800 feet.

Malco Refineries has set pipe at its Moffat County discovery, the No. 1 Kowach, c nw nw 25-6n-90w. In a drill stem test at 10,040-10,120 feet, operator recovered 1060 feet of heavily gas cut oil and 630 feet of water, production coming from the Weber.

Davis Oil is running casing at the No. 1 Kline, c ne se 12-3n-53w, an oil and gas discovery in Washington County. Operator recovered 650 feet of free oil in a drill stem test at 4622-28 feet. Previously, in a test at 4619-22 feet, gas was recovered at the rate of 3,500,000 cubic feet per day. Production was from the D sand.

Vance Thornburg is drilling a Paradox test, scheduled for 6000 feet, at the No. 1 Morgan, c nw se 34-36n-20w, Montezuma County. At last report, operator was drilling below 4300 feet. The location is in the extreme western part of the county and near the Utah state line.

Wytex Oil and J. G. Ladmer have completed on pump the No. 1 Robbins, c ne se 34-3n-52w, Washington County. Production at completion was 28 barrels of oil per day through perforations from the D sand at 4591½-97 feet.

Nebraska

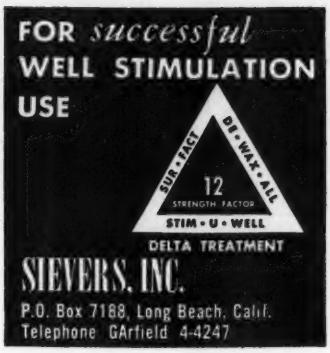
A second oil field in Red Willow County appears in prospect following a successful drill stem test by Mast Drilling at the No. 1 Poore, nw nw nw 29-2n-29w, six miles south of the town of McCook. In a one-hour drill stem test at 3620-50 feet, operator recovered 380 feet of 34 gravity oil and 50 feet of oil cut mud. The formation is the Lansing-Kansas City, which was topped at 3620 feet. The Barger field, about 25 miles to the north, is the only other production in the county. Joe Rothmeier of Boulder, Colo., Gulf Oil and Sunray Mid-Continent are interested in the venture, which is one of a series in the general area. Operator is awaiting completion rig.

In Banner County, Zephyr Drilling, Sunray Mid-Continent and Petroleum Inc. have completed a J sand discovery at the No. 1 Peterson, c se se 12-18n-57w. The well was brought in for an average of 148 barrels of clean oil per day, with production through perforations at 6471-75 feet.

Three miles west of the No. 1 Peterson, Pan American Petroleum has completed a J sand discovery at the No. 1 State-I, c sw sw 16-17n-55w. The well is producing 130 barrels of oil per day on pump, with the zone perforated at 6430-38 feet.

Miracle-Fifer Drilling is coring the J sand at the No. 1 Singleton, c sw sw 30-17n-53w, Banner County. The D sand was topped at 5471 feet, based on samples, and at last report was drilling round 5600 feet. The wildcat is a little over two miles northwest of the Fernquist field.

Tom Vessels Jr. and Strain Drilling are testing on pump the No. 1 State A, c sw sw 36-21n-56w, Scotts Bluff County, which swabbed 275 barrels of oil in 10 hours in an earlier test from the J sand. It is the first discovery for Scotts Bluff County.



Wyoming

Shell Oil Co.'s No. 14-18 Edwards, c sw sw 18-49n-75w, Campbell County, is waiting on orders after recovery of 5840 feet of gas cut oil on a drill stem test in the Parkman. The test was taken at the interval 6876-6928 feet. This well is an offset to the east of the Farmers Union Central Exchange Parkman discovery, the No. 1 Ferguson-Govt., w½ se se 13-49n-76w.

Belco Petroleum is planning to sandfrac its deep test in the Big Piney Gas field of Sublette County, the No. 1 Unit, ne sw se 4-28n-113w. The well has been drilled to 8416 feet total depth. Both oil and gas shows have been reported in the well, which is a test of the proposed Chimney Butte Unit. Gas production from the Big Piney field has been from shallow zones, with the oil shows at the current well reported to have been found at deeper levels. The company has released no detailed information. Five miles to the southeast, Belco Petroleum has staked location for a Frontier test, the No. 2 Unit, se nw 35-28n-113w.

Petroleum Inc. has found shows in cores and tests of the No. 1 Wanek, c ne sw 30-35n-67w, Converse County. The shows were from the Mesaverde, with the well scheduled to go to 6900 feet. Top of the Mesaverde was logged at 6104 feet.

In Big Horn County, Empire State Oil has tested gas at the No. 1 Govt, n nw w 15-55n-96w. This well will test the Tensleep, with objective expected at 7000 feet. It is three miles southeast of the South Byron field. Best gas production in any of the tests was 345,000 cubic feet per day at 4248-4304 feet.

Southeast of the Byron field, Colorado Oil and Gas has installed pump at the No. 1 Govt., c nw nw 9-55n-96w, Big Horn County, where production of seven barrels per hour was obtained following a 15-hour test. Production was from open hole at 6264-6312 feet by swabbing after acidizing. The well was drilled to 6798 feet total depth.

Owanah Oil and Development Co. will drill a wildcat in Crook County and on the eastern edge of the Powder River Basin. The test will be the No. 1 McKean, nw ne 11-50n-67w. It is located northeast of the Donkey Creek field, where there has been much recent activity.

First test of the Opal Unit, a 41,000-acre block in Lincoln County, is scheduled by Carter Oil Co. It will be the No. 1 Unit, s½ nw nw 34-22n-112w, and has the Nugget, expected at 12,000 feet as the objective.

In Natrona County, Atlantic Refining has scheduled a Muddy test, about 1500 feet, at No. 1 Diamond Ring, se sw 13-33n-83w. It is a mile southwest of the Poison Spider field.

Western Canada

A new pay zone has been encountered in the Bellshill Lake field of eastern Alberta, with Hudson's Bay et al finding oil in a drill stem test of the Viking at the Flag Lake No. 1, spotted on 1sd 7-23-41-12w4. This well was drilled as a Devonian test but was plugged back to the Viking. Associated with Hudson's Bay in the venture are Canadian Oil, Husky, Phillips Petroleum, and Banff Oil.

Northwest of the Smiley field in southwestern Saskatchewan, Canadian Seaboard has recovered gas at the rate of 2,500,000 cubic feet per day in the Detrital. The pay zone was topped at 2850 feet. The well is located on 1sd 7, 1-33-27w3.

Union Oil Announces Six Months Program

Union Oil Company will drill more wells and invest more money in such operations during the final six months of this year than in any similar period in the company's history, Reese H. Taylor, chairman of the board, reported in a letter to employees.

"Barring unforeseen circumstances," he wrote, "168 wells will be drilled in the next six months, 110 of which will be development wells and 58 will be wildcats. Some of these will be joint-interest ventures. In addition, Union plans to participate in 80 projects to be drilled by other operators, of which 10 will be wildcats.

"As in the past, the largest expenditures for development drilling will be in California, with main activity being in the East Coyote, Brea-Olinda, Dominguez, Bridge and West Arvin Fields.

"A much larger effort, than usual, will be directed to developing production in out-of-state areas, the most promising of which are the East Lake Palourde, Caillou Island, and Main Pass Fields in the Gulf Division, the South Cowden and Voss (Tannehill) Fields in West Texas, and the South Sturgeon Lake Field in Alberta, Canada, where continuous drilling programs will be carried on during the rest of the year. An appreciable part of the Field Department's program will be the further development of our large gas reserves in Louisiana, both onshore and offshore, and West Texas, Oklahoma, and Canada.

"The major portion of exploratory activity in the second half of the year will be in the Gulf Division where 18 wildcat wells are programmed, including seven joint-interest tests. This work will be concentrated in Southern Louisiana and offshore in the Gulf of Mexico. In Canada a number of wells will be drilled to further evaluate production possibilities of the Granite Wash formation in the Red Earth area, North Central Alberta, and to explore for possible oil and gas production in the Peace River area along the Alberta-British Columbia boundary. Our foreign operations will also include testing of a new structure in Costa Rica located some fifty miles north of the Cocoles operations and preliminary work in preparation for a joint-interest well to be drilled in Guatemala. We are a participant in a deep test currently drilling in the Kenai Peninsula, Alaska. Several exploratory tests are scheduled to be drilled in California along known fault trends in Los Angeles and Ventura Counties.

"Two important well completions have recently been made in Southern Louisiana. Klotz No. 1, in the extreme southeasterly part of the East Lake Palourde Field, Assumption Parish, was dually completed in two deep Miocene sands at a depth of 13,793 feet for combined initial production of 30 barrels per day from the two zones, with strong growing pressures. A dual completion was also made in Union-L.L.&E. State Lease 2826-4 in the Caillou Island Field, Terrebonne Parish, with combined initial production from the two deep zones of 465 barrels per day, and two additional wells are in process of completing, also as dual oil producers. Two strings of tools are in continuous operation in each of these fields."

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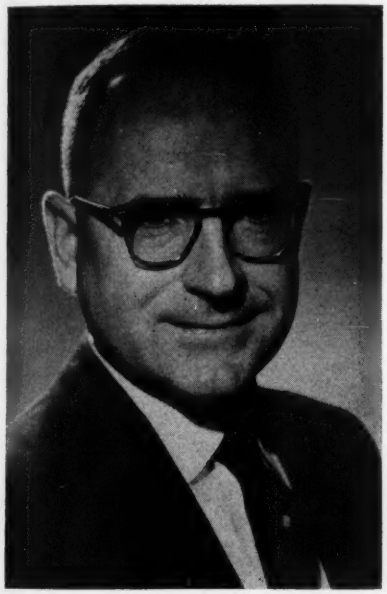
Personalities IN THE NEWS

Martin Advances at Shell

Appointment of Eugene S. Martin, 5001 Paseo Del Pavon, Torrance, as superintendent of Shell Chemical Corporation's synthetic rubber plant at Torrance was announced by Maarten Voogd, plant manager.



Eugene S. Martin

Martin succeeds G. S. Williamson, recently named manager of Shell Chemical's ammonia plant at Shell Point, in the San Francisco Bay area.

Before coming to Torrance in March of 1955 to fill the position of assistant plant superintendent, Martin served as senior technologist of Shell Chemical's manufacturing development department in New York. He joined the Shell Companies as a junior technologist at Shell Oil's Wilmington refinery in 1942 upon graduating from the University of California with a B.S. degree in petroleum engineering.

Born in Oatman, Arizona, the 39 year old industrial leader came to Torrance in 1923. He attended Torrance schools for two years then moved to Inglewood where his family resided for a number of years.

Martin is married to the former Harriet Taylor of Houston, Texas. They have one son, Timothy, age 18 months.

Foremost among the rubber executive's hobbies is his work as leader of a Long Beach Great Books discussion group.

Neel Upped at Tidewater

Henry H. Neel has been named to the newly-created post of manager of foreign exploration of Tidewater Oil Company, D. T. Staples, president, announced.

Neel will be responsible for the planning, coordination and operation of the company's oil and gas exploratory program abroad. Tidewater's foreign interests presently include Guatemala, Iran and Turkey.

A graduate of Stanford University,

Henry H. Neel

Neel joined the company's exploration staff in Ventura, California, in 1942. He was appointed assistant paleontologist there in 1943, and in succeed-

New members of the Los Angeles Chapter of Nomads being inducted into the Chapter at the June 12, 1957 meeting. Flanked on the left by Bill Brooks of Byron Jackson Tools, Inc., Vice President and Ritual Master, and on the right by Art Marshall of H. C. Smith Oil Tool Co., Member of the Induction Committee, the new members are: (left to right) Elvin K. Wilson of Shaffer Tool Works (Regular Member); John P. Davis, Jr. of Technical Oil Tool Corp. (Regular Member); Peter S. Carberry of Petroleum Week (Associate Member).

ing years served as district and divisional geologist.

In 1955 he became western division exploration manager, with headquarters in San Francisco where he will continue to be located in his new assignment.

Air Force General Appointed Tidewater Oil Vice President

Major General John R. Gilchrist, USAF (ret.) has joined Tidewater Oil Company as administrative vice president for organization planning and development, D. T. Staples, president, announced recently.

Major Gen. John R. Gilchrist

Until his retirement from the Air Force on June 26, General Gilchrist was both commander of the Air Force Finance Center in Denver and assistant Comptroller of the Air Force. In his post with Tidewater, a newly-created one, he will make his headquarters in San Francisco.

A native of Woonsocket, Rhode Island, he was graduated from the United States Military Academy in 1928, and has served in the armed forces continuously since then.

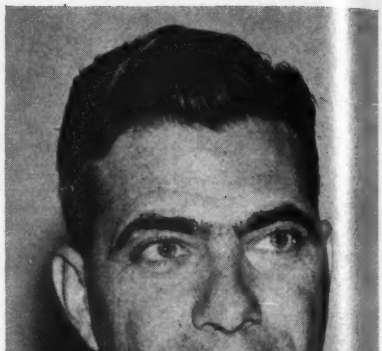
During World War II, he was assigned to General Eisenhower's headquarters in Europe where he was responsible for planning the financial phase of the occupation of Germany. For this he was awarded the Legion of Merit. He received an Oak Leaf Cluster for his postwar administration of the economic affairs of all occupied areas in behalf of the War Department General Staff.

In 1951, when the Air Force was authorized to operate its own finance system, General Gilchrist was assigned to place it in operation. It was in this connection that he organized the Denver finance center which, under his command, grew to become one of the nation's largest business machine operations and a model of efficiency.

Appointed Air Force director of finance in 1952, he supervised 10,000 employees in a worldwide network of 300 Air Force finance offices, and directed disbursements of over $80 billion in five years.

As assistant Air Force comptroller during the past year, General Gilchrist recommended and helped place in effect a merger of Air Force accounting and financial operations which led to substantial improvement in that service's efficiency and economy.

Theodore A. Bruce has returned to Albuquerque after a short stay in Los Angeles attending a business conference. He is field representative for Pendleton Tool Industries, Inc.



W. E. "Bill" Lacy, pictured above, was recently appointed California district manager for Black, Sivalls & Bryson, Inc. of Kansas City.

Bill graduated from Kansas State in chemical engineering and has been with Black, Sivalls & Bryson since 1949. He was formerly California district engineer until elevated to his new position. He replaces John H. Raidl, who has been transferred to Houston as district manager.

Foreign guests at the June 12, 1957 meeting of the Los Angeles Chapter of Nomads. Left to right (standing) Glenn S. Prosser of Peters Logging, S. A. from Trinidad; Jerry E. Deevers of International Brown Drilling from France; W. H. May of Santa Fe Drilling from Colombia; Hans Szepanek of Baker Oil Tools from Germany; Lee Corteau of Gulf Italia Co. from Sicily; J. M. Wilson of International Brown Drilling from Bahrein Island; Fred Peveto of Texas Petroleum from Colombia and Venezuela; (seated) Earl W. Richardson of D & E from Nigeria; C. M. White of LTS going to Algeria; Ralph H. Connor of LTS to Algeria; Deon Davidson of Baker Transworld from Venezuela; Mack Bell of LTS going to Algeria.

"Circulating" Type Baker Fill-Up Equipment Available

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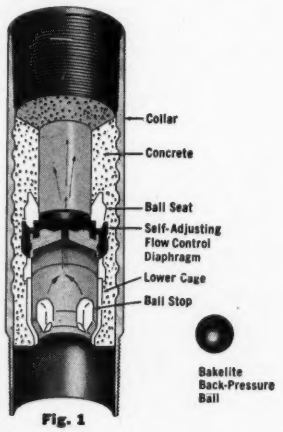


Fig. 1

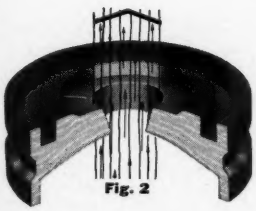


Fig. 2

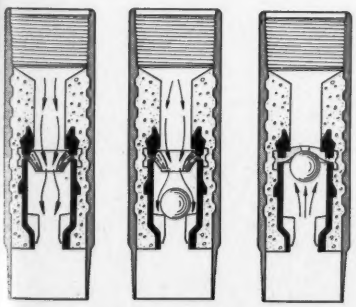


Fig. 3 Fig. 4 Fig. 5

It has been found that under certain clearances, such as 7" casing run in an 8¾" open hole, pressure surges over 5,000 psi can be created each time a joint of casing equipped with conventional floating equipment is lowered. Pressures of this magnitude are in the high-squeeze-pressure range, and can severely damage many formations— damage that may increase the completion cost considerably and decrease the productive life of the well.

With the new Baker "Circulating" Flexiflow Fill-Up Collar, the casing can be lowered at normal rates while protecting low-pressure, permeable zones from damaging pressure surges.

Baker Circulating Flexiflow Collars feature a type of variable valve, called a self-adjusting Flow Control Diaphragm, that acts automatically to reduce pressure surges and to provide controlled filling of the casing. When casing is lowered in the well, increase in pressure from below causes the small hole located in the center of the self-adjusting Flow Control Diaphragm to open up wider to relieve pressure from below by permitting a large volume of fluid to enter the casing; see Figure 2.

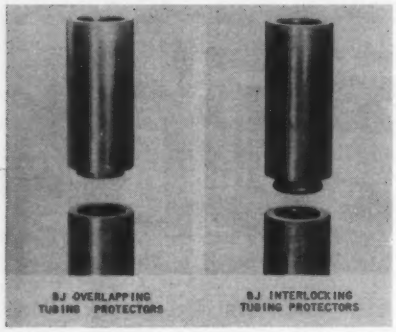
When downward movement of the casing is slowed down, pressure from below is reduced and the hole in the diaphragm contracts to normal size, as shown in Fig. 1, to restrict the entry of fluid and prevent overfilling. This action of the variable valve in opening wider and closing down, synchronizes the rate of filling the casing with the rate of lowering, and in so doing provides maximum relief from pressure surges. By reducing these pressure surges to a minimum, Circulating Flexiflow Collars help prevent costly circulation losses, reduce mudding-off of the producing zone, permit maximum recovery, and eliminate fracturing as a cause of primary cementing job failure. In addition, it is possible to circulate at any time while running-in. Bridges and debris from scratcher action can be washed away, and after circulating the advantage of pressure-relieving fill-up equipment still is retained; see Fig. 3.

An effective back-pressure valve for cementing is easily provided before the cement is pumped in, by dropping a Bakelite ball into the casing; then applying approximately 200 psi force to pass this ball through the self-adjusting Flow Control Diaphragm into the lower cage; see Fig. 4. Once the ball is pumped into the lower cage, the Diaphragm functions as a seat to provide an effective back-pressure valve; see Fig. 5, which shows how the Diaphragm permits passage of the ball in a downward direction only. Consequently, once the ball is forced through the Diaphragm, it remains in the lower cage.

Additional information is available from Baker Oil Tools, Inc., Box 2274 Terminal Annex, Los Angeles 54, California.

BJ Announces New Interlocking Tubing Protectors

A new line of overlapping and interlocking rubber tubing protectors is announced by Byron Jackson Tools, Inc., a subsidiary of Borg-Warner Corporation. The new protectors are of a convenient size that can be stretched on the tubing in an overlapping series to present a formidable length of solid rubber protection for the long tubing as it passes through the upper pay zone. The lip of one protector laps over the tongue of the next; the shoulders butt tightly together so that no



abrasive matter can get through to the tubing.

In dual completion, the longer production string is always in danger of being eroded by the abrasive sands at the upper perforated producing zone. To protect this critical tubing area, protectors as necessary can be put on with standard Byron Jackson PB installation tools. The new protectors are made of oil-resistant synthetic rubber which is tough enough to withstand the abrasive sand, yet is resilient enough to be stretched over tubing joints without difficulty.

The Byron Jackson PB Protectors are of two different types, the Overlapping and the Interlocking. Each is 6½" long (installed length). Both kinds of protectors are made for 2 ⅜" and 2 ⅞" tubing. Further details on these tubing savers are given in a new bulletin provided by Byron Jackson Tools, Inc., P. O. Box 2017A, Terminal Annex, Los Angeles 54, California.

New Baker Retrievable Casing Packer Proving Popular

The Baker Model "E" Retrievable Casing Packer is particularly suited for waterflooding and other operations. Although designed as a "set-down" packer, it can be used without modification, as an "up-strain" packer.

A simple, reliable J-Slot mechanism, actuated from the surface, makes the Model "E" Packer easy to set and to release. "Rocker" Slips eliminate need for cumbersome drag springs, the smooth pad portion of the Slip acting as a drag block to provide the necessary friction to operate the setting mechanism.

The Packing Element made of synthetic rubber, which has proved extremely successful on other Baker squeeze tools, provides a dependable, leak-proof pack-off.

The FULL BORE through this packer is larger than the drift diameter of the tubing so that pressure bombs, temperature recording devices, through-tubing jet perforators and other equipment can be run through the packer.

Overall dimensions range from 33 to 37 inches in the most used sizes, making it easier to store, ship and handle, and easier to remove should emergency methods be required.

Complete details are obtainable from Baker Oil Tools, Inc., Box 2274 Terminal Annex, Los Angeles 54, California.

New Offshore Kit for Mud Testing

A new portable offshore kit for determining the physical and chemical properties of drilling mud being used on offshore drilling rigs has been designed and manufactured by Magnet Cove Barium Corporation.

The new kit contains all the equipment necessary for a complete mud check, including the glassware and chemicals for running pilot tests with

Offshore kit for Mud Testing—Closed

Offshore kit for Mud Testing—Open

various treating agents. The solutions used in making necessary chemical analysis of drilling mud are bottled in non-breakable polyethylene containers.

The most important features of the unit are the viscosimeter, an instrument essential for the measurement of flow properties of mud, and a specially designed "Powr Pak" which is built into the kit. The "Powr Pak" converts either 120-volt AC or DC current to the 12 volts needed for operation of the viscosimeter and eliminates the necessity of transporting the heavy storage battery formerly used as the power source.

Complete with viscosimeter, "Powr Pak" and other testing equipment, the new offshore kit weighs 21 pounds.

It is light, easy to carry, and has been anodized to prevent rust or corrosion.

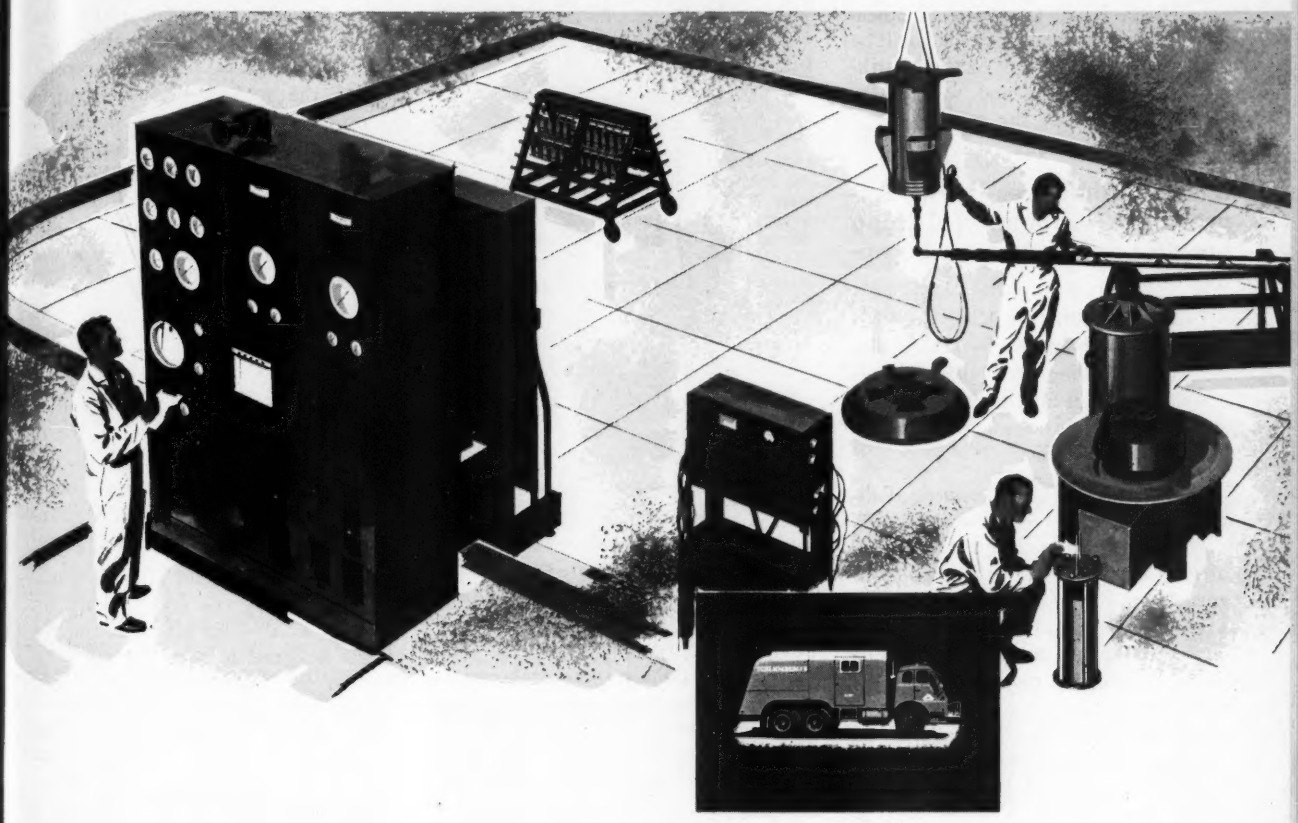
For more information, write to the Equipment Department, Magnet Cove Barium Corporation, P. O. Box 6504, Houston 5, Texas.

B. F. Goodrich Appoints Howard Supply Company Distributor for Koroseal Polyvinyl Plastic Pipe

Howard Supply Company, distributor of B. F. Goodrich mechanical rubber goods for many years, has been appointed to the distributorship of BFG Koroseal plastic pipe.

BFG Koroseal Polyvinyl pipe is now manufactured in sizes through 8" in Schedules 5 to 120. Complete stocks of Koroseal pipe, fittings and valves will be carried at the distributor's warehouses in Los Angeles, Oakland, Bakersfield, Santa Maria and Ventura. Koroseal is now produced in sheet form and also rod and tubing for severe corrosive conditions and will be carried in stock.

They set a new "drilling record" every day



When Schlumberger constructed its high pressure laboratory more than five years ago, drilling depths had barely exceeded 20,000 feet and bottom hole temperatures had seldom passed the 300 degree mark.

Yet the test wells in this Schlumberger laboratory were designed and constructed to reach 450 degrees maximum operating temperature and 25,000 psi working pressure, hydrostatically tested at 37,500 lbs.

As a result, Schlumberger had the cables, instruments and perforating guns perfected and ready to meet the challenge of extreme depths, pressures and temperatures when the present record well was drilled in Louisiana.

Since 1934, Schlumberger has logged every record depth well. And laboratories such as this, where extensive research into future drilling conditions is conducted years ahead of the actual need in the field, is only one of the reasons why Schlumberger is always ready.

The unparalleled backlog of research and experience which Schlumberger offers is reflected in the quality and service you receive on every survey, regardless of depth.

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PIONEERED PLASTIC PIPE

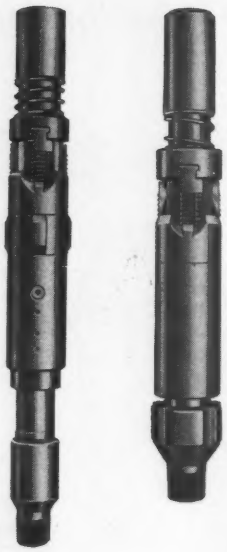
The Howard Supply Company, who has been a pioneer in the sale of plastic pipe for many years, will be assisted by a B. F. Goodrich Chemical Sales Engineer, whose services will be available through many of the distributor's twelve offices and warehouses located throughout the state.

Baker Announces New Approach to Problem of Tubing Breathing, Buckling in Pumping Wells

Two new tubing anchors, one that is tripped mechanically by rotation of the tubing string and one that is tripped hydraulically by the fluid in the tubing, have been announced by Baker Oil Tools, Inc.

Designated as "Compensating Tubing Anchors" these devices are of the fully automatic type in that they permit the tubing to move freely downward but prevent its moving upward. After the pumping is first started with empty tubing, the anchor permits the tubing to elongate more and more as it is being filled and both pressure and temperature rise. This allows the tubing to seek its most elongated position whereupon the anchor automatically performs its function of preventing tubing breathing and buckling.

The phenomenon of tubing breathing as the fluid load is alternately transferred from the sucker rods to the tubing in pumping wells has long been recognized as a major cause of lost pumping efficiency and increased wear on sucker rods, tubing and casing. The value of using some device to anchor the tubing string to help alleviate these conditions has been known for many years and several variations of the basic compression or tension-type anchors have been marketed for this purpose. More recently, tubing buckling has been pointed up as an even greater contributor to these problems. It is now an accepted fact that compression-type anchors only serve to aggravate buckling and tension-type anchors have become recognized as the only practical means of solving this problem. The conventional tension-type anchor, however, requires application of strain to the tubing at the surface, creating another set of problems on many wells.



The new anchors developed by Baker differ from other available tension-type anchors in that the tension is not applied from the surface but rather results from the natural elongation of the tubing and the fact that the anchor prevents it from contracting. In addition these anchors automatically compensate for later elongation due to changes in well conditions such as lowering of the fluid level as reservoir pressure declines and changes in fluid density as water-cut increases. Thus the correct amount of tension to prevent both tubing breathing and buckling is automatically maintained at all times throughout the life of the well. This eliminates the nearly impossible job of maintaining the proper amount of tension by adjusting the strain at the surface.

In the past the standard approach to the problem of applying tension has been either to take an undetermined amount of strain, usually inadequate to prevent buckling, or to calculate the required amount as nearly as possible with the data available and then take several thousand additional pounds to compensate for the inaccuracy of the data or for frequent changes in well conditions. In many wells this latter practice dangerously approached the joint-strength of the tubing. Since these new anchors supply no motivating force, but rather are automatically adjusted downward by the elongation of the tubing, it now becomes possible to eliminate buckling in many wells where it has previously not been advisable due to the low joint-strength of the tubing.

Design of the anchors is simple and yet unique in that the slips do not move onto the cone, but rather the cone is forced up under the slips, either by hydraulic pressure or rotation of the tubing, depending upon the model used. This, plus the inclusion of a coil spring that keeps the slips from retreating from the cone, provides for virtually immediate engagement of the slips, thus minimizing the possibility of their causing undue wear on the casing. Both models of the anchor have been provided with a quick, positive release. Additional information and literature on these new anchors is available from the manufacturer, Baker Oil Tools, Inc., at any of its branches.

New Mud Funnel

A new plastic mud funnel has been developed by Magnet Cove Barium Corporation for use in checking the viscosity of drilling muds at the rig. It was designed to meet the specifications of the Marsh funnel viscosimeter described in API Code RP-29.

The funnel is made of a plastic molded material that withstands both high and low extremes of temperature. Because of its low heat transfer, it permits easy handling of hot muds. The screen insert that strains cuttings from the mud is made of stainless steel.

The new plastic mud funnel has

several advantages. It is:

1. Easy to clean and maintain.
2. Precision calibrated for accuracy.
3. Extremely durable.
4. Usable at high mud temperatures.
5. Rust-proof and corrosion-proof.
6. Resistant to breakage or bending.

For more information, write to the Equipment Department, Magnet Cove Barium Corporation, P.O. Box 6504, Houston 5, Texas.

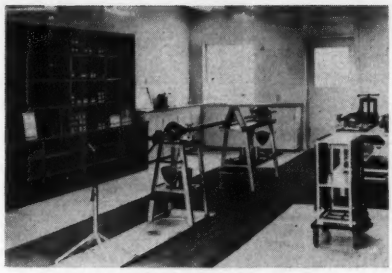
Continental-Emsco Opens Store at Farmington

Over 600 men of the industry attended the opening of the latest Continental-Emsco Company store at Farmington, New Mexico. The formal opening and barbecue were held June 15. Guests, with over 20 different companies, streamed through the store and pump shop throughout the day, looking over the brand new installations and the complete stocks.

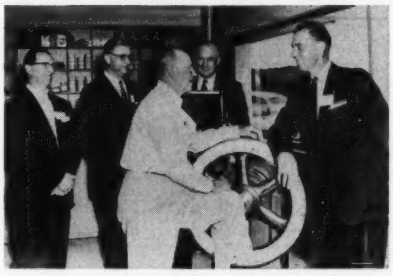
Located strategically to serve the San Juan and Paradox Basins and other areas around Farmington, this latest addition to the oil country supply and manufacturing company's stores features several new designs. Continental-Emsco has had a store in Farmington since 1950, but outgrew the facilities.

Fully stocked the new supply store carries a complete line of items for all drilling and production needs. Continental-Emsco has had a store in Farmington since 1950, but out-grew its facilities.

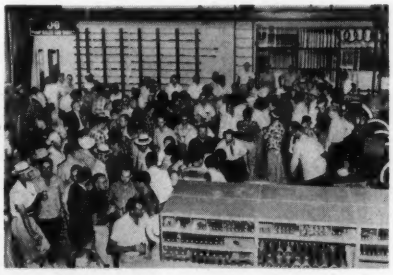
First of the stores built to the new standard plan adopted by Continental-Emsco Company, the Farmington store features many new innovations. This store will serve the San Juan and Paradox Basins.



Equipment for the D+B Pump Shop, located in the rear of the building, is custom designed for Continental-Emsco. This new equipment and spacious quarters make the pump shop the most modern in the industry.



J. B. Patterson, Continental-Emsco district manager; R. L. Collier, division manager; Earl Cosper, superintendent, Skelly Oil Company; F. I. Brinegar, executive vice president of Continental-Emsco and Bill Evans, store manager, discuss the day's events.



Over 600 people spent the day inspecting the Continental-Emsco store at Farmington, New Mexico. The formal opening and barbecue were held June 15.

Outstanding is the complete D+B Pump Shop operation within the building. Complete facilities are available for repairing and "customizing" pumps for every conditon. The fixtures and equipment are completely new in design, having been designed and built to Continental-Emsco's specifications. This new equipment makes the pump shop operation at Farmington the most modern available.

The 46' by 140' all steel building has a porcelain enamel front and is the first built to the new standard store design adopted by Continental-Emsco. The sales room area is 30' by 46' finished in natural birch paneling. Every effort to make the sales room more comfortable and pleasant for the many customers has been made. The entire sales room is air conditioned. Three offices are located in this sales area for the store manager and other store personnel.

Bill Evans has been appointed store manager for the Farmington store and other store personnel include: Johnny P. Brewer, J. C. Trowell, Field Salesmen and D. M. Butler, Sales Representative. The Farmington store is located in Continental-Emsco's West Texas and New Mexico Division and is under the direction of R. L. Collier, Division Manager.

Paradox Oil Seeps Evident

The Paradox Basin, one of the greatest oil development areas at Four Corners, is about 250 miles long and 125 miles wide. It runs northwest from Four Corners. Strangely enough, according to R. R. Robison, who is in charge of oil work for Shell Oil Company in that part of the country, oil seeps were reported there as long ago as 1879. However, the first real development did not come about until 1907 to 1910. In an address the other month in Salt Lake, the Shell executive told that oil was found near Mexican Hat in March of 1908 and the subsequent scramble for land was not unlike the rush for leases around wildcat discoveries at the present time. The oil leader related that interest was so great that promoters even gave thought to constructing a pipeline to the Santa Fe Railroad in 1909. Within the boundaries are areas with such distinct and colorful names as Piute Folds, Circle Cliffs Uplift, and the San Rafael Swell. On the north, Robison explained, are the Rock Cliffs along the southern rim of the Unita Basin; on the northeast and east are the Uncompahgre Uplift and San Juan Dome, and on the south are the San Juan Basin and Tyende Saddle. The San Juan Basin and the Paradox are the two most important areas to date at Four Corners.

THIS LAUGH

OFF!!

By the time everybody gets through with the federal budget, about all the average taxpayer can do is budget the balance.

Doctor—"That pain in your leg is caused by old age."

Grandpa—"Nonsense. The other leg is the same age and doesn't hurt a bit."

Judge—"What's the charge, officer?"

Officer—"Fragrancy, your honor He's been drinking perfume."

The Irishman was relating his adventures in the jungle.

"Ammunition, food and whiskey had run out," he said, "and we were all parched with thirst."

"But wasn't there any water?"

"Sure, but it was no time to be thinking of cleanliness."

"Murphy got rich quick, didn't he?" "I'll say! He can't swing a golf club yet without spitting on his hands."

Jamison—"I used to sell underthings to nudist colonies."

Jackson—"What kind of underthings?"

Jamison—"Cushions."

"I won't get married until I find a girl like the one grandpa married."

"You won't find women like that today."

"That's funny. Gramp married her only yesterday."

"Sorry, but I've an appointment to see a model home."

"Great! See if she can't get a friend for me."

Doctor — "I've examined you thoroughly and I think all you need is a good rest."

Mrs. Smith—"But I feel I need some medicine. Why don't you look at my tongue?"

Doctor—"That needs a rest too!"

The female is the sex that believes that if you charge it, it's not spending; and if you add a cherry to it, it's not intoxicating.

"Well, doctor, was my operation a success?"

"Who's a doctor? I'm St. Peter."

A tourist is a fellow who travels many hundreds of miles in order to get a snapshot of himself standing by his automobile.

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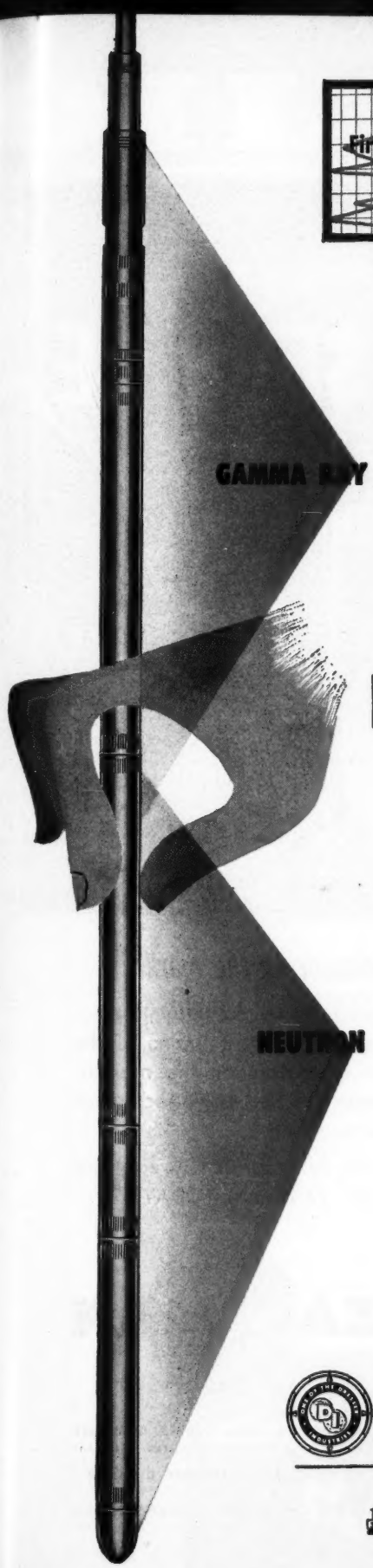

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